

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

WEST Search History

DATE: Wednesday, May 07, 2003

Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT; PLUR=YES; OP=OR

L18	"thr ala ala xaa lys"	0	L18
L17	cam same (arg or arginine) same (lys or lysine)	16	L17
L16	cam same (arg or arginine) same (lys or lysine) same (substitut\$ or replac\$ or insert\$)	2	L16
L15	"thr ala ala lys lys"	0	L15
L14	\$taakkar\$ or ?taakkar?	0	L14
L13	\$taarkar\$ or ?taarkar?	0	L13
L12	\$fltaarkarag\$ or ?fltaarkarag?	0	L12
L11	L10 and calmodul\$	0	L11
L10	\$aarka\$ or ?aarka?	33	L10
L9	calmodul\$ same (arg or arginine) same (lys or lysine) same (substitut\$ or replac\$ or insert\$)	4	L9
L8	calmodul\$ same (arg or arginine) same (lys or lysine)	30	L8
L7	calmodul\$ same (arg or arginine) or (lys or lysine)	301135	L7
L6	calmodul\$ same (arg or lys or arginine or lysine) same 74	4	L6
L5	L4 and 74	112	L5
L4	calmodul\$ same (arg or lys or arginine or lysine)	242	L4
L3	L2 and calmodul\$	9	L3
L2	"ala ala arg lys"	164	L2
L1	"thr ala ala arg lys"	0	L1

END OF SEARCH HISTORY

WEST Search History

DATE: Wednesday, May 07, 2003

Set Name Query

side by side

Hit Count Set Name

result set

DB=USPT; PLUR=YES; OP=OR

L24	"SIMONETTI; LUCIE"	0	L24
L23	"BERNARD; DOMINIQUE"	4	L23
L22	"MEHUL; BRUNO"	0	L22
L21	L20	31	L21
L20	L19 and l2	31	L20
L19	@PY <= 1999	6462803	L19
L18	"thr ala ala xaa lys"	0	L18
L17	cam same (arg or arginine) same (lys or lysine)	16	L17
L16	cam same (arg or arginine) same (lys or lysine) same (substitut\$ or replac\$ or insert\$)	2	L16
L15	"thr ala ala lys lys"	0	L15
L14	\$taakkar\$ or ?taakkar?	0	L14
L13	\$taarkar\$ or ?taarkar?	0	L13
L12	\$fltaarkarag\$ or ?fltaarkarag?	0	L12
L11	L10 and calmodul\$	0	L11
L10	\$aarka\$ or ?aarka?	33	L10
L9	calmodul\$ same (arg or arginine) same (lys or lysine) same (substitut\$ or replac\$ or insert\$)	4	L9
L8	calmodul\$ same (arg or arginine) same (lys or lysine)	30	L8
L7	calmodul\$ same (arg or arginine) or (lys or lysine)	301135	L7
L6	calmodul\$ same (arg or lys or arginine or lysine) same 74	4	L6
L5	L4 and 74	112	L5
L4	calmodul\$ same (arg or lys or arginine or lysine)	242	L4
L3	L2 and calmodul\$	9	L3
L2	"ala ala arg lys"	164	L2
L1	"thr ala ala arg lys"	0	L1

END OF SEARCH HISTORY

=> s qefltaarkarag/sqsp
L4 4 QEFLTAARKARAG/SQSP

=> s taarkara/sqsp
L5 5 TAARKARA/SQSP

=> file caplus

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		53.80	118.45

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	ENTRY	SINCE FILE SESSION	TOTAL
CA SUBSCRIBER PRICE		0.00	-1.95

FILE 'CAPLUS' ENTERED AT 12:35:30 ON 07 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 7 May 2003 VOL 138 ISS 19
FILE LAST UPDATED: 6 May 2003 (20030506/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l5
L6 4 L5

=> d l6 all 1-4

L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2003:112150 CAPLUS
DN 138:131969

TI Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

AU Strausberg, Robert L.; Feingold, Elise A.; Grouse, Lynette H.; Derge, Jeffery G.; Klausner, Richard D.; Collins, Francis S.; Wagner, Lukas; Shenmen, Carolyn M.; Schuler, Gregory D.; Altschul, Stephen F.; Zeeberg, Barry; Buetow, Kenneth H.; Schaefer, Carl F.; Bhat, Narayan K.; Hopkins, Ralph F.; Jordan, Heather; Moore, Troy, Max, Steve I.; Wang, Jun; Hsieh, Florence; Diatchenko, Luda; Marusina, Kate; Farmer, Andrew A.; Rubin, Gerald M.; Hong, Ling; Stapleton, Mark; Soares, M. Bento; Bonaldo, Maria F.; Casavant, Tom L.; Scheetz, Todd E.; Brownstein, Michael J.; Usdin, Ted B.; Toshiyuki, Shiraki; Carninci, Piero; Prange, Christa; Raha, Sam S.; Loquellano, Naomi A.; Peters, Garrick J.; Abramson, Rick D.; Mullahy, Sara J.; Bosak, Stephanie A.; McEwan, Paul J.; McKernan, Kevin J.; Malek, Joel A.; Gunaratne, Preethi H.; Richards, Stephen; Worley, Kim C.; Hale, Sarah; Garcia, Angela M.; Gay, Laura J.; Hulyk, Stephen W.; Villalon, Debbie K.; Muzny, Donna M.; Sodergren, Erica J.; Lu, Xihua; Gibbs, Richard A.;

Earliest reference is a
journal article (2000).

No prior art.

Fahey, Jessica; Helton, Erin; Ketteman, Mark; Madan, Anuradha; Rodrigues, Stephanie; Sanchez, Amy; Whiting, Michelle; Madan, Anup; Young, Alice C.; Shevchenko, Yuriy; Bouffard, Gerard G.; Blakesley, Robert W.; Touchman, Jeffrey W.; Green, Eric D.; Dickson, Mark C.; Rodriguez, Alex C.; Grimwood, Jane; Schmutz, Jeremy; Myers, Richard M.; Butterfield, Yaron S. N.; Krzywinski, Martin I.; Skalska, Ursula; Smailus, Duane E.; Schnerch, Angelique; Schein, Jacqueline E.; Jones, Steven J. M.; Marra, Marco A.

CS National Cancer Institute, NIH, Bethesda, MD, 20892-2580, USA

SO Proceedings of the National Academy of Sciences of the United States of America (2002), 99(26), 16899-16903

CODEN: PNASA6; ISSN: 0027-8424

PB National Academy of Sciences

DT Journal

LA English

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 6, 13

AB The National Institutes of Health Mammalian Gene Collection (MGC) Program is a multiinstitutional effort to identify and sequence a cDNA clone contg. a complete ORF for each human and mouse gene. ESTs were generated from libraries enriched for full-length cDNAs and analyzed to identify candidate full-ORF clones, which then were sequenced to high accuracy. The MGC has currently sequenced and verified the full ORF for a nonredundant set of >9000 human and >6000 mouse genes. Candidate full-ORF clones for an addnl. 7800 human and 3500 mouse genes also have been identified. All MGC sequences and clones are available without restriction through public databases and clone distribution networks. [This abstr. record is one of eleven records for this document necessitated by the large no. of index entries required to fully index the document and publication system constraints.]

ST cDNA protein sequence mouse human

IT Human

Mouse

Protein sequences

cDNA library

cDNA sequences

(generation and initial anal. of more than 15,000 full-length human and mouse cDNA sequences)

IT Proteins

cDNA

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(generation and initial anal. of more than 15,000 full-length human and mouse cDNA sequences)

IT Gene, animal

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(open reading frame; generation and initial anal. of more than 15,000 full-length human and mouse cDNA sequences)

IT 479789-59-8 479789-60-1 479789-64-5 479789-65-6 479789-66-7

(Biological study)

(nucleotide sequence; generation and initial anal. of more than 15,000 full-length human and mouse cDNA sequences)

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2002:978007 CAPLUS

DN 138:50807

TI In silico screening for phenotype-associated expressed sequences and its application to differentially expressed markers for tumor-associated antigens in human and hyperosmotic stress in Arabidopsis

IN Baranova, A. V.; Yankovsky, N. K.; Kozlov, A. P.; Lobashev, A. V.; Krukovskaya, L. L.

PA Biomedical Center, Russia

SO PCT Int. Appl., 516 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12Q

CC 3-1 (Biochemical Genetics)

Section cross-reference(s): 11, 14, 15, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO	2002103028	A2	20021227	WO	2002-IB4189	20020530
----	----	------------	----	----------	----	-------------	----------

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI	US	2001-293999P	P	20010530
------	----	--------------	---	----------

	US	2001-330457P	P	20011022
--	----	--------------	---	----------

	US	2002-357144P	P	20020219
--	----	--------------	---	----------

AB The present invention provides methods for detg. whether a nucleic acid sequence is a marker for a phenotype or cell type of interest. A database of expressed sequence tag sequences (ESTs) from the species is provided and said ESTs are placed in groups termed clusters based on homol. of ESTs within each cluster. The total no. of ESTs within said cluster are detd. for each cluster. The clusters are ordered sequentially based on the no. of ESTs in each cluster and ordered clusters divided into subranges based on the no. of ESTs per cluster. For each cluster subrange obtained, the no. of ESTs within said cluster which are expressed in said predetd. cell type of interest are detd., calcg. according to a normal distribution the no. of clusters in each subrange expected to contain a predetd. threshold percentage of ESTs expressed in said cell type of interest. Said threshold percentage is a percentage from about 10% to about 100%. The no. of clusters is detd. in each subrange obsd. to contain said predetd. threshold percentage of ESTs expressed in said predetd. cell type. Subranges are identified having an obsd. no. of clusters that meet said predetd. threshold percentage greater than the no. of clusters expected to meet said predetd. threshold percentage for the subrange according to normal distribution. If the percentage of ESTs expressed in said cell type of interest in a cluster identified is equal to or greater than said predetd. threshold percentage, the cluster contains a nucleic acid that is a marker for the cell type of interest. The method if this invention is applied to (1) ESTs encoding human tumor-assocd. antigens (esp. colon cancer) and (2) markers for hyperosmotic stress (high salt conditions) in *Arabidopsis thaliana*.

ST gene expression marker screening phenotype cluster analysis; EST marker screening phenotype cluster analysis; tumor assocd antigen cDNA sequence screening cancer human; osmotic stress gene expression screening *Arabidopsis*

IT Gene, animal

RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (GUCY2C; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in *Arabidopsis*)

IT Statistical analysis

(Monte Carlo; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in *Arabidopsis*)

- IT Gene, animal
 - RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (POM36; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gene, animal
 - RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (POM37; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gene, animal
 - RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (POM63; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gene, animal
 - RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (POM6; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Diagnosis
 - (cancer; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Mammary gland
 - Pancreas, neoplasm
 - (carcinoma; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Intestine, neoplasm
 - (colon; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gene
 - RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 - (expression; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Arabidopsis thaliana
 - Cluster analysis
 - Computer application
 - Gene expression profiles, animal
 - Gene expression profiles, plant
 - Human
 - Lung, neoplasm
 - Neoplasm
 - Ovary, neoplasm
 - Protein sequences
 - Testis, neoplasm
 - Tumor markers
 - cDNA sequences
 - (in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT EST (expressed sequence tag)
 - RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); THU

- (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gamete and Germ cell
(neoplasm; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Stress, plant
(osmotic; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Double stranded RNA
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(small interfering; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Head
Neck, anatomical
(squamous cell carcinoma; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antigens
Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tumor-assocd.; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Vaccines
(tumor; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antitumor agents
(vaccines; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT 9054-75-5, Guanylate cyclase
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(2C; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT 479206-99-0 479207-00-6 479207-01-7 479207-02-8 479207-03-9 479207-08-4 479207-09-5 479207-10-8 479207-11-9 479207-12-0 479299-40-6 479299-42-8
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(nucleotide sequence; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in

Arabidopsis)

IT 479321-65-8 479321-66-9 479321-67-0 479321-68-1 479321-69-2
 479321-70-5 479321-71-6 479321-72-7

RL: PRP (Properties)
 (unclaimed nucleotide sequence; in silico screening for
 phenotype-assocd. expressed sequences and its application to
 differentially expressed markers for tumor-assocd. antigens in human
 and hyperosmotic stress in Arabidopsis)

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2001:78523 CAPLUS

DN 134:143576

TI Calmodulin-like skin protein CLSP of human and cDNA and their use in
 cosmetics and pharmaceuticals

IN Mehul, Bruno; Bernard, Dominique; Simonetti, Lucie

PA L'Oreal, Fr.

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA French

IC ICM C12N015-12

ICS C07K014-47; C07K016-18; A61K038-17; A61K048-00

CC 6-3 (General Biochemistry)

Section cross-reference(s): 1, 3, 13, 62

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001007604	A1	20010201	WO 2000-FR1048	20000420
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FR 2796646	A1	20010126	FR 1999-9615	19990723
EP 1204744	A1	20020515	EP 2000-922701	20000420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003505081	T2	20030212	JP 2001-512873	20000420
PRAI FR 1999-9615	A	19990723		
WO 2000-FR1048	W	20000420		

AB The invention concerns human protein CLSP (calmodulin-like skin protein)
 and cDNA encoding it as well as use of the protein or cDNA in
 pharmaceuticals or cosmetics. The protein or cDNA may be used to treat
 dry skin, hyperkeratosis, parakeratosis, psoriasis, ichthyosis, and
 neoplasia. CLSP exhibited 4 calcium binding sites and was shown to bind
 calcium. The protein was shown by affinity chromatog. to assoc. with
 transglutaminase 3, galectin 7, annexin 2, MRP14, heparanase III, heat
 shock protein 27, SCCE, and ribosomal protein L9.

ST sequence human calmodulin like skin protein CLSP cDNA

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP
 (Properties); THU (Therapeutic use); BIOL (Biological study); PROC
 (Process); USES (Uses)
 (CLSP; calmodulin-like skin protein CLSP of human and cDNA and their
 use in cosmetics and pharmaceuticals)

IT Heat-shock proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)

- (HSP 27, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Annexins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (IL, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Ribosomal proteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (L9, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Proteins, specific or class
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (MRP14, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Antitumor agents
 Cosmetics
 Protein sequences
 Psoriasis
 cDNA sequences
 (calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin, disease
 (dry, calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin
 (epidermis, proliferation and differentiation, CLSP for regulation of; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Agglutinins and Lectins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (galectin-7, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Keratosis
 (hyperkeratosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin, disease
 (ichthyosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Keratosis
 (parakeratosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin
 (stratum corneum, CLSP of; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 80146-85-6, Transglutaminase 89800-66-8, Heparanase
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 282122-08-1
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (amino acid sequence; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 263688-53-5
 RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(nucleotide sequence; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)

IT 322774-15-2 322774-16-3 322774-17-4 322774-18-5 322774-19-6
 RL: PRP (Properties)
 (unclaimed sequence; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Anon; DATABASE EMBL/HINXTON
- (2) Corley, N; US 6046315 A 2000 CAPLUS
- (3) Goli, S; US 5763220 A 1998 CAPLUS
- (4) Hitomi, J; EP 0731166 A 1996 CAPLUS
- (5) Naik, U; JOURNAL OF BIOLOGICAL CHEMISTRY 1997, V272(8), P4651 CAPLUS
- (6) Oreal; FR 2761363 A 1998 CAPLUS
- (7) Peterson, L; CLINICAL RESEARCH 1982, V30(1), PA159
- (8) Polans, A; JOURNAL OF CELL BIOLOGY 1991, V112(5), P981 CAPLUS
- (9) Puszkin, E; J BIOL CHEM 1985, V260(29), P16012 CAPLUS
- (10) Schafer, B; TIBS TRENDS IN BIOCHEMICAL SCIENCES 1996, V21(4), P134 MEDLINE
- (11) Wilkinson, M; J CELL SCI 1988, V91(Pt2), P221

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:302887 CAPLUS
 DN 133:101054
 TI Identification and cloning of a new calmodulin-like protein from human epidermis
 AU Mehul, Bruno; Bernard, Dominique; Simonetti, Lucie; Bernard, Marie Alix; Schmidt, Rainer
 CS Life Sciences Research, Centre Charles Zviak, L'Oreal, Clichy, 92583, Fr.
 SO Journal of Biological Chemistry (2000), 275(17), 12841-12847
 CODEN: JBCHA3; ISSN: 0021-9258
 PB American Society for Biochemistry and Molecular Biology
 DT Journal
 LA English
 CC 6-3 (General Biochemistry)
 Section cross-reference(s): 3, 13

AB After sepg. by two-dimensional gel electrophoresis an ext. of total proteins from human stratum corneum, two spots were extd. and analyzed for their peptide sequence. The resulting internal protein sequences provided evidence for the identification of a new calcium-binding protein. Cloning of the corresponding full-length cDNA was achieved by reverse transcriptase-polymerase chain reaction using two keratinocyte libraries, one from proliferating cultured keratinocytes and one from differentiated keratinocytes of reconstructed human epidermis. The cDNA had an open reading frame encoding a new calcium-binding protein of 146 amino acids, a member of the calmodulin family. We named this new protein calmodulin-like skin protein (CLSP), since reverse transcriptase-polymerase chain reaction studies of CLSP expression in 10 different human tissues revealed that this protein was particularly abundant in the epidermis where its expression is directly related to keratinocyte differentiation. Expression of the cloned cDNA in Escherichia coli yielded a recombinant protein which allowed its further characterization. RCLSP is able to bind calcium, and similarly to calmodulin, exposes thereafter hydrophobic parts which most likely interact with target proteins. Epidermal proteins retained by CaM affinity column are quant. and qual. distinct from those of the rCLSP column. Sequencing of a rCLSP affinity purified protein revealed 100% identity with transglutaminase 3, a key enzyme in terminal differentiation, indicating an important role of CLSP in this process.

ST epidermis calcium binding protein CLSP cDNA sequence; keratinocyte differentiation calmodulin like protein CLSP

IT Calcium-binding proteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP

- (Properties); BIOL (Biological study); PROC (Process)
 (CLSP (calmodulin-like skin protein); identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT Skin
 (epidermis; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT Cell differentiation
 Protein sequences
 cDNA sequences
 (identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT Skin
 (keratinocyte; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT Skin
 (stratum corneum; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT 282122-08-1
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
 (amino acid sequence; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT 7440-70-2, Calcium, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)
- IT 263688-53-5, GenBank AF172852
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
 (nucleotide sequence; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Boyce, S; J Invest Dermatol 1983, V81, P33s MEDLINE
- (2) Burgess, W; Biochim Biophys Acta 1980, V623, P257 CAPLUS
- (3) Chen, H; Anal Biochem 1993, V212, P295 CAPLUS
- (4) Cheung, W; Adv Cyclic Nucleotide Res 1978, V9, P233 CAPLUS
- (5) Cheung, W; Biochem Biophys Res Commun 1970, V38, P733
- (6) Crivici, A; Annu Rev Biophys Biomol Struct 1995, V24, P85 CAPLUS
- (7) Fairley, J; J Invest Dermatol 1985, V84, P195 CAPLUS
- (8) Fauchere, J; Eur J Med Chem 1983, V18, P369 CAPLUS
- (9) Hennings, H; Cell 1980, V19, P245 CAPLUS
- (10) Katoka, M; Proc Natl Acad Sci U S A 1989, V86, P6944
- (11) Kawasaki, H; Anal Biochem 1990, V186, P264 CAPLUS
- (12) Kawasaki, H; Anal Biochem 1990, V191, P332 CAPLUS
- (13) Lee, S; J Biol Chem 1996, V271, P4561
- (14) Lundstrom, A; Acta Derm Venereol (Stockh) 1991, V71, P471 MEDLINE
- (15) Marsden, B; Biochem Cell Biol 1990, V68, P587 CAPLUS
- (16) Merrill, C; Electrophoresis '86 1986, P273 CAPLUS
- (17) Mizumoto, T; J Invest Dermatol 1985, V85, P450 CAPLUS
- (18) O'Neil, K; Trends Biochem Sci 1990, V15, P59 CAPLUS
- (19) Reichert, U; Molecular Biology of the Skin 1993, P107 CAPLUS
- (20) Rice, R; Biochem J 1990, V265, P351 CAPLUS

- (21) Rose, G; Science 1985, V229, P834 CAPLUS
- (22) Steven, A; J Struct Biol 1990, V104, P150 CAPLUS
- (23) Tabernero, L; Structure 1997, V5, P613 CAPLUS
- (24) Tsukita, S; J Cell Biol 1985, V101, P2070 CAPLUS
- (25) Van Eldik, L; Calmodulin and Signal Transduction 1998
- (26) Van de Kerkhof, P; Br J Dermatol 1983, V108, P217 MEDLINE
- (27) Vogel, H; Mol Cell Biochem 1995, V149/150, P3
- (28) Watt, F; J Cell Sci 1988, V90, P525

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal653lxm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

***** Welcome to STN International *****

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
NEWS 3 Jun 03 New e-mail delivery for search results now available
NEWS 4 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 5 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
now available on STN
NEWS 6 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 7 Sep 03 JAPIO has been reloaded and enhanced
NEWS 8 Sep 16 Experimental properties added to the REGISTRY file
NEWS 9 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 10 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11 Oct 24 BEILSTEIN adds new search fields
NEWS 12 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 13 Nov 18 DKILIT has been renamed APOLLIT
NEWS 14 Nov 25 More calculated properties added to REGISTRY
NEWS 15 Dec 04 CSA files on STN
NEWS 16 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 17 Dec 17 TOXCENTER enhanced with additional content
NEWS 18 Dec 17 Adis Clinical Trials Insight now available on STN
NEWS 19 Jan 29 Simultaneous left and right truncation added to COMPENDEX,
ENERGY, INSPEC
NEWS 20 Feb 13 CANCERLIT is no longer being updated
NEWS 21 Feb 24 METADEX enhancements
NEWS 22 Feb 24 PCTGEN now available on STN
NEWS 23 Feb 24 TEMA now available on STN
NEWS 24 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 25 Feb 26 PCTFULL now contains images
NEWS 26 Mar 04 SDI PACKAGE for monthly delivery of multiframe SDI results
NEWS 27 Mar 19 APOLLIT offering free connect time in April 2003
NEWS 28 Mar 20 EVENTLINE will be removed from STN
NEWS 29 Mar 24 PATDPAFULL now available on STN
NEWS 30 Mar 24 Additional information for trade-named substances without
structures available in REGISTRY
NEWS 31 Apr 11 Display formats in DGENE enhanced
NEWS 32 Apr 14 MEDLINE Reload
NEWS 33 Apr 17 Polymer searching in REGISTRY enhanced
NEWS 34 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 35 Apr 21 New current-awareness alert (SDI) frequency in
WPIDS/WPINDEX/WPIX
NEWS 36 Apr 28 RDISCLOSURE now available on STN

NEWS 37 May 05 Pharmacokinetic information and systematic chemical names
added to PHAR

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS INTER General Internet Information

NEWS LOGIN Welcome Banner and News Items

NEWS PHONE Direct Dial and Telecommunication Network Access to STN

NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 12:28:57 ON 07 MAY 2003

=> file registry

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		0.21	0.21

FILE 'REGISTRY' ENTERED AT 12:29:04 ON 07 MAY 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 6 MAY 2003 HIGHEST RN 511508-58-0

DICTIONARY FILE UPDATES: 6 MAY 2003 HIGHEST RN 511508-58-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> s lkisevdsdgdgeisfqefltaarkaragled/sqsp
L1 0 LKISEVDSGDGEISFQEFLTAARKARAGLED/SQSP

=> s LISEVDSGDGEISFQEFLTAARKARAGLE/sqsp
L2 3 LISEVDSGDGEISFQEFLTAARKARAGLE/SQSP

=> file caplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
 ENTRY SESSION
FULL ESTIMATED COST 54.20 54.41

FILE 'CAPLUS' ENTERED AT 12:31:09 ON 07 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 7 May 2003 VOL 138 ISS 19
FILE LAST UPDATED: 6 May 2003 (20030506/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2
L3 3 L2

=> d all l3 1-3

L3 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2002:978007 CAPLUS
DN 138:50807
TI In silico screening for phenotype-associated expressed sequences and its application to differentially expressed markers for tumor-associated antigens in human and hyperosmotic stress in Arabidopsis
IN Baranova, A. V.; Yankovsky, N. K.; Kozlov, A. P.; Lobashev, A. V.; Krukovskaya, L. L.
PA Biomedical Center, Russia
SO PCT Int. Appl., 516 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 11, 14, 15, 63
FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002103028 A2 20021227 WO 2002-IB4189 20020530

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-293999P P 20010530

US 2001-330457P P 20011022

US 2002-357144P P 20020219

AB The present invention provides methods for detg. whether a nucleic acid sequence is a marker for a phenotype or cell type of interest. A database of expressed sequence tag sequences (ESTs) from the species is provided and said ESTs are placed in groups termed clusters based on homol. of ESTs within each cluster. The total no. of ESTs within said cluster are detd. for each cluster. The clusters are ordered sequentially based on the no. of ESTs in each cluster and ordered clusters divided into subranges based on the no. of ESTs per cluster. For each cluster subrange obtained, the no. of ESTs within said cluster which are expressed in said predetd. cell type of interest are detd., calcg. according to a normal distribution the no. of clusters in each subrange expected to contain a predetd. threshold percentage of ESTs expressed in said cell type of interest. Said threshold percentage is a percentage from about 10% to about 100%. The no. of clusters is detd. in each subrange obsd. to contain said predetd. threshold percentage of ESTs expressed in said predetd. cell type. Subranges are identified having an obsd. no. of clusters that meet said predetd. threshold percentage greater than the no. of clusters expected to meet said predetd. threshold percentage for the subrange according to normal distribution. If the percentage of ESTs expressed in said cell type of interest in a cluster identified is equal to or greater than said predetd. threshold percentage, the cluster contains a nucleic acid that is a marker for the cell type of interest. The method if this invention is applied to (1) ESTs encoding human tumor-assocd. antigens (esp. colon cancer) and (2) markers for hyperosmotic stress (high salt conditions) in *Arabidopsis thaliana*.

ST gene expression marker screening phenotype cluster analysis; EST marker screening phenotype cluster analysis; tumor assocd antigen cDNA sequence screening cancer human; osmotic stress gene expression screening *Arabidopsis*

IT Gene, animal

RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (GUCY2C; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in *Arabidopsis*)

IT Statistical analysis

(Monte Carlo; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in *Arabidopsis*)

IT Gene, animal

RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP

(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(POM36; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(POM37; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(POM63; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP
(Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(POM6; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Diagnosis
(cancer; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Mammary gland
Pancreas, neoplasm
(carcinoma; in silico screening for phenotype-assocd. expressed
sequences and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Intestine, neoplasm
(colon; in silico screening for phenotype-assocd. expressed sequences
and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Gene
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical
study); BIOL (Biological study)
(expression; in silico screening for phenotype-assocd. expressed
sequences and its application to differentially expressed markers for
tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT Arabidopsis thaliana
Cluster analysis
Computer application
Gene expression profiles, animal
Gene expression profiles, plant
Human
Lung, neoplasm
Neoplasm
Ovary, neoplasm
Protein sequences
Testis, neoplasm
Tumor markers
cDNA sequences
(in silico screening for phenotype-assocd. expressed sequences and its
application to differentially expressed markers for tumor-assocd.

- antigens in human and hyperosmotic stress in Arabidopsis)
- IT EST (expressed sequence tag)
 RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antibodies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Gamete and Germ cell
 (neoplasm; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Stress, plant
 (osmotic; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Double stranded RNA
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (small interfering; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Head
 Neck, anatomical
 (squamous cell carcinoma; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antigens
 Proteins
 RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (tumor-assocd.; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Vaccines
 (tumor; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT Antitumor agents
 (vaccines; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)
- IT 9054-75-5, Guanylate cyclase
 RL: ADV (Adverse effect, including toxicity); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (2C; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT 479206-99-0 479207-00-6 479207-01-7 479207-02-8 479207-03-9
 479207-08-4 479207-09-5 479207-10-8 479207-11-9 479207-12-0
 479207-13-1 479207-14-2 479207-15-3 479207-16-4 479295-59-5
 479295-61-9 479295-63-1 479295-65-3 479295-67-5 479295-69-7
 479295-71-1 479295-73-3 479295-75-5 479295-77-7 479295-79-9
 479295-81-3 479295-83-5 479295-85-7 479295-87-9 479295-89-1
 479295-91-5 479295-93-7 479295-95-9 479295-97-1 479295-99-3
 479296-01-0 479296-03-2 479296-05-4 479296-07-6 479296-09-8
 479296-11-2 479296-13-4 479296-15-6 479296-17-8 479296-19-0
 479296-20-3 479296-21-4 479296-23-6 479296-25-8 479296-27-0
 479296-29-2 479296-31-6 479296-33-8 479296-35-0 479296-37-2
 479296-39-4 479296-41-8 479296-43-0 479296-45-2 479296-47-4
 479296-49-6 479296-51-0 479296-53-2 479296-55-4 479296-57-6
 479296-59-8 479296-61-2 479296-63-4 479296-65-6 479296-67-8
 479296-69-0 479296-72-5 479296-74-7 479296-76-9 479296-78-1
 479296-80-5 479296-82-7 479296-84-9 479296-87-2 479296-89-4
 479296-91-8 479296-94-1 479296-96-3 479296-98-5 479296-99-6
 479297-01-3 479297-03-5 479297-06-8 479297-09-1 479297-11-5
 479297-14-8 479297-16-0 479297-20-6 479297-21-7 479297-23-9
 479297-25-1 479297-27-3 479297-29-5 479297-35-3 479297-37-5
 479297-39-7 479297-41-1 479297-43-3 479297-46-6 479297-48-8
 479297-50-2 479297-52-4 479297-54-6 479297-56-8 479297-58-0
 479297-60-4 479297-63-7 479297-65-9 479297-68-2 479297-70-6
 479297-72-8 479297-74-0 479297-76-2 479297-78-4 479297-80-8
 479297-82-0 479297-84-2 479297-87-5 479297-89-7 479297-91-1
 479297-93-3 479297-95-5 479297-97-7 479297-99-9 479298-01-6
 479298-03-8 479298-05-0 479298-07-2 479298-09-4 479298-11-8
 479298-13-0 479298-15-2 479298-17-4 479298-19-6 479298-21-0
 479298-23-2 479298-25-4 479298-27-6 479298-29-8 479298-31-2
 479298-34-5 479298-36-7 479298-38-9 479298-40-3 479298-42-5
 479298-44-7 479298-46-9 479298-48-1 479298-50-5 479298-52-7
 479298-54-9 479298-56-1 479298-58-3 479298-60-7 479298-62-9
 479298-64-1 479298-66-3 479298-68-5 479298-70-9 479298-72-1
 479298-74-3 479298-76-5 479298-79-8 479298-81-2 479298-83-4
 479298-85-6 479298-87-8 479298-89-0 479298-91-4 479298-93-6
 479298-96-9 479298-98-1 479299-00-8 479299-02-0 479299-05-3
 479299-08-6 479299-10-0 479299-13-3 479299-14-4 479299-16-6
 479299-18-8 479299-20-2 479299-22-4 479299-24-6 479299-28-0
 479299-30-4 479299-32-6 479299-34-8 479299-37-1 479299-39-3
 479299-41-7 479299-43-9

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(amino acid sequence; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT 479207-04-0 479207-05-1 479207-06-2 479207-07-3 479295-58-4
 479295-60-8 479295-62-0 479295-64-2 479295-66-4 479295-68-6
 479295-70-0 479295-72-2 479295-74-4 479295-76-6 479295-78-8
 479295-80-2 479295-82-4 479295-84-6 479295-86-8 479295-88-0
 479295-90-4 479295-92-6 479295-94-8 479295-96-0 479295-98-2
 479296-00-9 479296-02-1 479296-04-3 479296-06-5 479296-08-7
 479296-10-1 479296-12-3 479296-14-5 479296-16-7 479296-18-9
 479296-22-5 479296-24-7 479296-26-9 479296-28-1 479296-30-5
 479296-32-7 479296-34-9 479296-36-1 479296-38-3 479296-40-7

479296-42-9 479296-44-1 479296-46-3 479296-48-5 479296-50-9
 479296-52-1 479296-54-3 479296-56-5 479296-58-7 479296-60-1
 479296-62-3 479296-64-5 479296-66-7 479296-68-9 479296-70-3
 479296-71-4 479296-73-6 479296-75-8 479296-77-0 479296-79-2
 479296-81-6 479296-83-8 479296-85-0 479296-86-1 479296-88-3
 479296-90-7 479296-92-9 479296-93-0 479296-95-2 479296-97-4
 479297-00-2 479297-02-4 479297-04-6 479297-05-7 479297-07-9
 479297-08-0 479297-10-4 479297-12-6 479297-13-7 479297-15-9
 479297-17-1 479297-18-2 479297-19-3 479297-22-8 479297-24-0
 479297-26-2 479297-28-4 479297-30-8 479297-31-9 479297-32-0
 479297-33-1 479297-34-2 479297-36-4 479297-38-6 479297-40-0
 479297-42-2 479297-44-4 479297-45-5 479297-47-7 479297-49-9
 479297-51-3 479297-53-5 479297-55-7 479297-57-9 479297-59-1
 479297-61-5 479297-62-6 479297-64-8 479297-66-0 479297-67-1
 479297-69-3 479297-71-7 479297-73-9 479297-75-1 479297-77-3
 479297-79-5 479297-81-9 479297-83-1 479297-85-3 479297-86-4
 479297-88-6 479297-90-0 479297-92-2 479297-94-4 479297-96-6
 479297-98-8 479298-00-5 479298-02-7 479298-04-9 479298-06-1
 479298-08-3 479298-10-7 479298-12-9 479298-14-1 479298-16-3
 479298-18-5 479298-20-9 479298-22-1 479298-24-3 479298-26-5
 479298-28-7 479298-30-1 479298-32-3 479298-33-4 479298-35-6
 479298-37-8 479298-39-0 479298-41-4 479298-43-6 479298-45-8
 479298-47-0 479298-49-2 479298-51-6 479298-53-8 479298-55-0
 479298-57-2 479298-59-4 479298-61-8 479298-63-0 479298-65-2
 479298-67-4 479298-69-6 479298-71-0 479298-73-2 479298-75-4
 479298-77-6 479298-78-7 479298-80-1 479298-82-3 479298-84-5
 479298-86-7 479298-88-9 479298-90-3 479298-92-5 479298-94-7
 479298-95-8 479298-97-0 479298-99-2 479299-01-9 479299-03-1
 479299-04-2 479299-06-4 479299-07-5 479299-09-7 479299-11-1
 479299-12-2 479299-15-5 479299-17-7 479299-19-9 479299-21-3
 479299-23-5 479299-25-7 479299-26-8 479299-27-9 479299-29-1
 479299-31-5 479299-33-7 479299-35-9 479299-36-0 479299-38-2
 479299-40-6 479299-42-8

RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(nucleotide sequence; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

IT 479321-65-8 479321-66-9 479321-67-0 479321-68-1 479321-69-2
 479321-70-5 479321-71-6 479321-72-7

RL: PRP (Properties)

(unclaimed nucleotide sequence; in silico screening for phenotype-assocd. expressed sequences and its application to differentially expressed markers for tumor-assocd. antigens in human and hyperosmotic stress in Arabidopsis)

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2001:78523 CAPLUS

DN 134:143576

TI Calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals

IN Mehul, Bruno; Bernard, Dominique; Simonetti, Lucie

PA L'Oreal, Fr.

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA French

IC ICM C12N015-12

ICS C07K014-47; C07K016-18; A61K038-17; A61K048-00

CC 6-3 (General Biochemistry)

Section cross-reference(s): 1, 3, 13, 62

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO 2001007604	A1	20010201	WO 2000-FR1048	20000420
----	---------------	----	----------	----------------	----------

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

FR 2796646	A1	20010126	FR 1999-9615	19990723
------------	----	----------	--------------	----------

EP 1204744	A1	20020515	EP 2000-922701	20000420
------------	----	----------	----------------	----------

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2003505081	T2	20030212	JP 2001-512873	20000420
---------------	----	----------	----------------	----------

PRAI	FR 1999-9615	A	19990723
------	--------------	---	----------

WO 2000-FR1048	W	20000420
----------------	---	----------

AB The invention concerns human protein CLSP (calmodulin-like skin protein) and cDNA encoding it as well as use of the protein or cDNA in pharmaceuticals or cosmetics. The protein or cDNA may be used to treat dry skin, hyperkeratosis, parakeratosis, psoriasis, ichthyosis, and neoplasia. CLSP exhibited 4 calcium binding sites and was shown to bind calcium. The protein was shown by affinity chromatog. to assoc. with transglutaminase 3, galectin 7, annexin 2, MRP14, heparanase III, heat shock protein 27, SCCE, and ribosomal protein L9.

ST sequence human calmodulin like skin protein CLSP cDNA

IT Proteins, specific or class

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(CLSP; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)

IT Heat-shock proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(HSP 27, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)

IT Annexins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(II, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)

IT Ribosomal proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(L9, CLSP binding to; calmodulin-like skin protein CLSP of human and

- cDNA and their use in cosmetics and pharmaceuticals)
- IT Proteins, specific or class
 - RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 - (MRP14, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Antitumor agents
 - Cosmetics
 - Protein sequences
 - Psoriasis
 - cDNA sequences
 - (calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin, disease
 - (dry; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin
 - (epidermis, proliferation and differentiation, CLSP for regulation of; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Agglutinins and Lectins
 - RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 - (galectin-7, CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Keratosis
 - (hyperkeratosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin, disease
 - (ichthyosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Keratosis
 - (parakeratosis; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT Skin
 - (stratum corneum, CLSP of; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 80146-85-6, Transglutaminase 89800-66-8, Heparanase
 - RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 - (CLSP binding to; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 282122-08-1
 - RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 - (amino acid sequence; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 263688-53-5
 - RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
 - (nucleotide sequence; calmodulin-like skin protein CLSP of human and cDNA and their use in cosmetics and pharmaceuticals)
- IT 322774-15-2 322774-16-3 322774-17-4 322774-18-5 322774-19-6
 - RL: PRP (Properties)
 - (unclaimed sequence; calmodulin-like skin protein CLSP of human and

cDNA and their use in cosmetics and pharmaceuticals)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Anon; DATABASE EMBL/HINXTON
- (2) Corley, N; US 6046315 A 2000 CAPLUS
- (3) Goli, S; US 5763220 A 1998 CAPLUS
- (4) Hitomi, J; EP 0731166 A 1996 CAPLUS
- (5) Naik, U; JOURNAL OF BIOLOGICAL CHEMISTRY 1997, V272(8), P4651 CAPLUS
- (6) Oreal; FR 2761363 A 1998 CAPLUS
- (7) Peterson, L; CLINICAL RESEARCH 1982, V30(1), PA159
- (8) Polans, A; JOURNAL OF CELL BIOLOGY 1991, V112(5), P981 CAPLUS
- (9) Puszkun, E; J BIOL CHEM 1985, V260(29), P16012 CAPLUS
- (10) Schafer, B; TIBS TRENDS IN BIOCHEMICAL SCIENCES 1996, V21(4), P134 MEDLINE
- (11) Wilkinson, M; J CELL SCI 1988, V91(Pt2), P221

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2000:302887 CAPLUS

DN 133:101054

TI Identification and cloning of a new calmodulin-like protein from human epidermis

AU Mehul, Bruno; Bernard, Dominique; Simonetti, Lucie; Bernard, Marie Alix; Schmidt, Rainer

CS Life Sciences Research, Centre Charles Zviak, L'Oreal, Clichy, 92583, Fr.

SO Journal of Biological Chemistry (2000), 275(17), 12841-12847

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

CC 6-3 (General Biochemistry)

Section cross-reference(s): 3, 13

AB After sepg. by two-dimensional gel electrophoresis an ext. of total proteins from human stratum corneum, two spots were extd. and analyzed for their peptide sequence. The resulting internal protein sequences provided evidence for the identification of a new calcium-binding protein. Cloning of the corresponding full-length cDNA was achieved by reverse transcriptase-polymerase chain reaction using two keratinocyte libraries, one from proliferating keratinocytes and one from differentiated keratinocytes of reconstructed human epidermis. The cDNA had an open reading frame encoding a new calcium-binding protein of 146 amino acids, a member of the calmodulin family. We named this new protein calmodulin-like skin protein (CLSP), since reverse transcriptase-polymerase chain reaction studies of CLSP expression in 10 different human tissues revealed that this protein was particularly abundant in the epidermis where its expression is directly related to keratinocyte differentiation. Expression of the cloned cDNA in Escherichia coli yielded a recombinant protein which allowed its further characterization. RCLSP is able to bind calcium, and similarly to calmodulin, exposes thereafter hydrophobic parts which most likely interact with target proteins. Epidermal proteins retained by CaM affinity column are quant. and qual. distinct from those of the rCLSP column. Sequencing of a rCLSP affinity purified protein revealed 100% identity with transglutaminase 3, a key enzyme in terminal differentiation, indicating an important role of CLSP in this process.

ST epidermis calcium binding protein CLSP cDNA sequence; keratinocyte differentiation calmodulin like protein CLSP

IT Calcium-binding proteins

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(CLSP (calmodulin-like skin protein); identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT Skin

(epidermis; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT Cell differentiation

Protein sequences

cDNA sequences

(identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT Skin

(keratinocyte; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT Skin

(stratum corneum; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT 282122-08-1

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)

(amino acid sequence; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT 7440-70-2, Calcium, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

IT 263688-53-5, GenBank AF172852

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(nucleotide sequence; identification and cloning of new calcium-binding calmodulin-like protein CLSP from human epidermis and its role in keratinocyte differentiation)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Boyce, S; J Invest Dermatol 1983, V81, P33s MEDLINE
- (2) Burgess, W; Biochim Biophys Acta 1980, V623, P257 CAPLUS
- (3) Chen, H; Anal Biochem 1993, V212, P295 CAPLUS
- (4) Cheung, W; Adv Cyclic Nucleotide Res 1978, V9, P233 CAPLUS
- (5) Cheung, W; Biochem Biophys Res Commun 1970, V38, P733
- (6) Crivici, A; Annu Rev Biophys Biomol Struct 1995, V24, P85 CAPLUS
- (7) Fairley, J; J Invest Dermatol 1985, V84, P195 CAPLUS
- (8) Fauchere, J; Eur J Med Chem 1983, V18, P369 CAPLUS
- (9) Hennings, H; Cell 1980, V19, P245 CAPLUS
- (10) Katoka, M; Proc Natl Acad Sci U S A 1989, V86, P6944
- (11) Kawasaki, H; Anal Biochem 1990, V186, P264 CAPLUS
- (12) Kawasaki, H; Anal Biochem 1990, V191, P332 CAPLUS
- (13) Lee, S; J Biol Chem 1996, V271, P4561

- (14) Lundstrom, A; Acta Derm Venereol (Stockh) 1991, V71, P471 MEDLINE
- (15) Marsden, B; Biochem Cell Biol 1990, V68, P587 CAPLUS
- (16) Merrill, C; Electrophoresis '86 1986, P273 CAPLUS
- (17) Mizumoto, T; J Invest Dermatol 1985, V85, P450 CAPLUS
- (18) O'Neil, K; Trends Biochem Sci 1990, V15, P59 CAPLUS
- (19) Reichert, U; Molecular Biology of the Skin 1993, P107 CAPLUS
- (20) Rice, R; Biochem J 1990, V265, P351 CAPLUS
- (21) Rose, G; Science 1985, V229, P834 CAPLUS
- (22) Steven, A; J Struct Biol 1990, V104, P150 CAPLUS
- (23) Tabernero, L; Structure 1997, V5, P613 CAPLUS
- (24) Tsukita, S; J Cell Biol 1985, V101, P2070 CAPLUS
- (25) Van Eldik, L; Calmodulin and Signal Transduction 1998
- (26) Van de Kerkhof, P; Br J Dermatol 1983, V108, P217 MEDLINE
- (27) Vogel, H; Mol Cell Biochem 1995, V149/150, P3
- (28) Watt, F; J Cell Sci 1988, V90, P525

=> file registry

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		32.00	307.11

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) TOTAL	ENTRY	SESSION	SINCE FILE
CA SUBSCRIBER PRICE		-7.16	-7.16

FILE 'REGISTRY' ENTERED AT 13:46:05 ON 07 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 6 MAY 2003 HIGHEST RN 511508-58-0
DICTIONARY FILE UPDATES: 6 MAY 2003 HIGHEST RN 511508-58-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STN Note 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e savdtdgngt/sqep

E1 1 SAVDRRTTGAQTDDNVM/SQEP

E2 1 SAVDSQRGEINTEQSKLY/SQEP

E3 0 --> SAVDTDGNGT/SQEP

E4 1

SAVDWAGWLLVVVLLGVTLAATVRKERDGTIVIRAEGKDAAIQVRVENGILVII
AIDMGS

WCDDSLTVELVTIDVGEEFVDVDLSCRNV DGVYLEVGRCGKDEGSRLRRSVIIRS
HADGD

LTGRGHKWLEGDSLRLTHLTRVEGWVWINLVILAVIAVVWLTVESVVTRVAVV
VVLLCLA

PVYA/SQEP

E5 1
SAVDWAGWLLVVVLLGVTLAATVRKERDGTTVIRAEGKDAATQVRVENGTCVI
LATDMGS

WCDDSLIYECVTIDQGEEPVDVDCSCRNV DGVYLEYGRCGKQEGSRTRRSVLIPS
HAQGD

LTGRGHKWLEGDSL RTHLTRVEGWVWKNKVLTLAVIAVVWLTVESVVTRVAV
VVLLCLA

PVYA/SQEP

E6 1
SAVDWTGWLLVVVLIGVTLAATVRKERDGTTVIRAEGKDAATQVRVENGTCVI
LATDMGS

WCDDSLTYECVTIDQGEEPVDVDCFCRNVDGVYLEYGRCGKQEGSRTRRSVLIP
SHAQGD

LTGRGHKWLEGDSL RTHLTRVEGWVWKNKILTLAVIAVVWLTVESVVTRIAVV
VVLLCLA

PVYA/SQEP

E7 1
SAVDWTGWLLVVVLLGVTLAATVRKERDGTTVIRAEGKDAATQVRVENGTCVI
LATDMGS

WCDDSLTYECVTIDQGEEPVDVDCSCRNV DGVYLEYGRCGKQEGSRTRRSVLIP
SHAQGD

LTGRGHKWLEGDSL RTHLTRVEGWVWKNKVLTLAVIAVVWLTVESVVTRVAV
VVLLCLA

PVYA/SQEP

E8 1 SAVE/SQEP
E9 1 SAVEEMEAE EAAAK/SQEP

E10 1
SAVEFP PSLSHTTGTRP RTPILLQQENGYFIHTLWMGLALLGVLGDLSGQHRRPR
SPCQP

NFQQDKFLGRWFKRGLASNSSWLREKKAALSMCKSVVAPATDGGFNLTSTFLQ
EKTSVET

RTMLLQPRGVPSASLQLTGVPHWGQAHYSVSVVETDYDQYALLYTRASKGPGE
DFRMATL

YSRTQTPRAELKEKFTAFCK/SQEP

E11 1
SAVEFVYTDRFHLILGISVEFLCSLRSDATMESITACLHALQALLDVPWPRSKIGS
DQDS

GIELLNVLHRVILTRESPSIQLASLEVVRQIICAAQEHVKEKRRSAEVDDGAAEKE
TLPE

FGEGKDTGGLVPGKSLVFATLELCVCILVRQLPELNPCLTGSPGVKATKPQILLED
GSRL

VSAALVILSELPVCSPEGS/SQEP

E12 1

SAVEKKTGLGRIVQIIGPVLDVAFPPGQMPNIYNALVVQGRDNEQTNVTCEVQQ
VGNNRV

RAVAMSDTAGLMRGMEVIDTGAPISVPVGGATLGRIFNVLGEPVDNLGPVDTKT
TSPIHR

SAPAFVQLDTKLSIFETGIKVVDLLAPYRRGGKIGLFGGAGVGKTVLIMELINNIA
KAHG

GVSVFGGVGERTRENDLYM/SQEP

=> e MAGELTPEEE/sqep

E1 1

MAGELSQEALLDFLCQAGGRVRNAELLSHFKSFLRDPHVSPGQLQERRERFKGF
VNSVAA

VRQDPDGTKYVVLKRRYRDLLGEEGLQRP GPVDGKPRGHRRRDPEPQKPPAGA
GTQVDVG

GSAQKVAGPDPSPEDSPNQRTPEPEAAQARGRCAAVGTRGRCCWECQQNGWG
QSTGQPLP

EDLGDPVACEKPERAAPAR/SQEP

E2 2

MAGELSWQSLQETLVLQGELDRETLPLWQQRETLLADKSRIDVSQLQRVDSSG
LALLVH

FRELQSQRGHSLEIIGISNRLATLIELYNLQQIIPVETAS/SQEP

E3 0 --> MAGELTPEEE/SQEP

E4 1

MAGELTPEEEAQYKKAFAVDTDGNGTINAQELGAALKATGKNLSEAQLKKLIS
E/SQEP

E5 1

MAGELTPEEEAQYKKAFAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLIS
EVDGDG

DGEISFQEFLTAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPL
PQEELD

AMIREADVDDQGRVNYEEFARMLAQE/SQEP

E6 3
MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLIS
EVDSDG

DGEISFQEFLTAAKKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPL
PQEELD
 AMIREADVDDQDGRVNYEEFARMLAQE/SQEP

E7 3
MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLIS
EVDSDG

DGEISFQEFLTAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPL
PQEELD
 AMIREADVDDQDGRVNYEEFARMLAQE/SQEP

E8 1
MAGELVEFEEGTIGIALNLESNNVGCVLMGDGLMIQEGSLHATTELENRSSWVA
ECSLNI

QVTTELEGSVCLMEHLKTQHVSIPPRARIQYTFPQLFFYKPNLWWPNGMGKQSL
YNVSIT

VDVKGHGESDSWGQLFGFRKIESHIDSATGGRLFKVNGQPIFIRGGNWILSDCLL
LLSKE
 RYKTDIKFHADMNLNMIRCW/SQEP

E9 1
MAGELVRCP SIPHKL ENHHHFTDMRAFTTHLNHASSRFYGTAGRYFMQKITDDA
EIWKQV

VIKRFNEYLDVLQKNHDLNDQNARTARLFAAAMMGVQLACQTKVLPLDEKPLL
TGIEHCF

IDWLGQQPNKESYEDYKILKQASDFMQTNSMYFLNLETTYDAPPPFVSLGFVKK
GEEEDE
 FYLYPAVFTEKLCKGFDKNK/SQEP

E10 3
MAGELVSFAVNKLWDLLSHEYTLFQGVEDQVAELKSDLNLLKSFLKDADAKKH
TSALVRY

CVEEIKDIVYDAEDVLETQKEKLGTTS GIRKHIKRLTCIVPDRREIALYIGHVSK
RIT

RVIRDMQSFGVQQMIVDDYMHPLNREREREIRRTFPKDNESGFVALEENVKKLVG
YFVEED
 NYQVV SITGMGGLGKTTLAR/SQEP

E11 3

MAGELVSFGIKKLWDLSSQECEQFQGVEDQVTGLKRDLNLLSSFLKDADAKKH
TTAVVRN

VVEEIKEIVYDAEDIIETYLLKEKLWKTSGIKMRIRRHACIISDRRRNALDVGGIRT
RIS

DVIRDMQSFQVQQAIVDGGYMQPQGDRQREMRTFSKDYESDFVGLEVNVKKL
VGYLVD

ENVQVVSITGMGGLGKTTLA/SQEP

E12 1

MAGELYFSGVTGAYDWGSVLDNIMAVKSIPIQKLQKKQLINQKLQILGEFSQK
LSDLKN

LIENFNLESALKTKKADVSDSDVISVSVSENAPEISFSVNVLNTASKEILVYDAGF
NSLD

ETIGSDGSFTLRYTSPDYVEYTIDYSLIDTLKDIVNINETQDYVKASIYYDGN
KYKL

MLAETSEENSTVETAPDLST/SQEP

=> s e4 or e5

1

MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLKKLIS
E/SQEP

15745 SQL=55

1

(MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLKKLI
SE)/SQEP

(MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLKKLI
SE)/SQEP

AND SQL=55)

1

MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLIS
EVDGDGDGEI

SFQEFLTAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPLPQEE
LDAMIREADV

DQDGRVNYEEFARMLAQE/SQEP

17218 SQL=146

1

(MAGELTPEEEAQYKKAFSAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLIS
SEVDGDGDGEI

ISFQEFLTAAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPLPQE
ELDAMIREAD
VDQDGRVNYEEFARMLAQE)/SQEP

(MAGELTPEEEAQYKKAFAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLI
SEVDGDGD

GEISFQEFLTAAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPL
QEELDAMI

READVDQDGRVNYEEFARMLAQE)/SQEP AND SQL=146)

L14 2

(MAGELTPEEEAQYKKAFAVDTDGNGTINAQELGAALKATGKNLSEAQLKKLI
SE)/SQEP

OR

(MAGELTPEEEAQYKKAFAVDTDGNGTINAQELGAALKATGKNLSEAQLRKLI
SEVDGDGD

DGEISFQEFLTAAARKARAGLEDLQVAFRAFDQDGDGHITVDELRRAMAGLGQPL
PQEELDAMIR

EADVDQDGRVNYEEFARMLAQE)/SQEP

=> e lisevdsdgd/sqep

E1 1

LISELRNPMVYSYTEKKRIRKDFGKRQVLDVPYLLSIQLDSFQKFIEQDPEGQNG
LEAA

FRSVFPIQSYSGSSELQYVSYRLGEPVFDVKECQIRGVYTYSAPLRVKLRLVIYERE
APEG

TVKDIKEQEVYMG EIPLMTDNGTFVINGTERVIVSQLHRSPGVFFDSDKGKTHSS
GKVLV

NARIIPYRGSWLDFEFDPKD)/SQEP

E2 1 LISETLATFGGL)/SQEP

E3 0 --> LISEVDSGD)/SQEP

E4 1 LISEVLVKVMHEKAGLDAGG)/SQEP

E5 2

LISFDLCQPVQQITAIGPVRLRSGPEAQPSVGPDMVILSRSWGIFTSSNHRE)/SQEP

E6 1 LISFEEHVG)/SQEP

E7 1 LISFEEHVGPSAAPK)/SQEP

E8 1 LISFEEHVGPSAAPK)/SQEP

E9 1

LISFDHALMIILMIITVVAYMMGMMIVNMYTNRFMLEGQMIEVAWTIAPAILV
FIAVP

SLRLLYLMDEIHKPSMTLKAIGHQWWLSYEYSDFTKVEFDAYMITQDESNNNTF
RLD TD

NHITLPMNSFIRIIVTAADVLH SWT VPSLGIKTDATPGRLNQCGFLMNRPG LFY GQ
CSEI

CGANHSFMPIVIESVSTNTF/SQEP

E10 1

LISFHDHALMIILMIITVVAYMMGMMIVNMYTNRFMLEGQMIEVAWTIVPAILV
FIAVP

SLRLLYLMDEIHKPALTLKAIGHQVYWSYEYSDFIKVEFDAYMMPQDES DKNMF
RLD TD

NHTTLP MNSFIRIIVTAADVLH SWT IP SLGIKTDATPVRLNQCGFLINRPGLFY GQC
SEI

CGANHSFMPIVIESVSTNTF/SQEP

E11 1

LISFHDHALMIILMIITVVAYMMSMMILNKYTNRFMLEGQMIEVAWTIAPAILVF
IAVP

SLRLLYLMDEIHSPSLTLKAIGHQWYWSYEYSDFTKAEFDSYMPMQTEMSKEAF
RLD TD

NHTTLP MNSFIRIIVTAADVLH SWT VPSLGIKTDATPGRLNQCSFLINRPGLFY GQ
CSEI

CGANHSFMPIVIESVSTNAF/SQEP

E12 1

LISFHDHALMIILMIMTVVAYMMGMLALNKHTNRFMLEGQMIEVAWTIVPAIL
VFIAVP

SLRLLYLMDEIHKPALTLKAIGHQVYWSYEYSDFIKVEFDAYMMPQDES DKNMF
RLD TD

NHTTLP MNSFIRIIVTAADVLH SWT IP SLGIKTDATPGRLNQCGFLINRPGLFY GQC
SEI

CGANHSFMPIVIESVSTNIF/SQEP

=> e dgeisfqefl/sqep

E1 2 DGEIDLKLLTKVLAPEHEVRE/SQEP

E2 1

DGEIEYSTLSEEIKGVETIHKQGIEKRSVLPVVKGILGGVLKGVKVVKGASILTG
LAEI

VKNALKGQVMISRIQFDNHTPEELPTLEIEYSTLSEENEGVETSHKHGLEKRSVKK
VFKK

ILGGVIKGSKIVGNGASILGGLAKMLNKTIRDEVMSRIQFDNHTQEELPTLEIEYA
VLS

DENEGVETSHKQRLEKRAVL/SQEP

E3 0 --> DGEISFQEFL/SQEP

E4 1

DGEIVGAIDQGLLVLPVEPEDTREHADKLLHKLLNYRVFSDEQGKMNLSLKDV
GGLLL

VSQFTLAADTRSGMRPSFSTAAPPPLGAELFDYLLHKARGQCTDVASGRFGADM
QVH/SQ

EP

E5 1 DGEIVGEGYHQR/SQEP

E6 1 DGEKEHANAKK/SQEP

E7 1 DGEKEHANALK/SQEP

E8 1 DGEKF/SQEP

E9 1 DGEKFGDPLG/SQEP

E10 1 DGEKFGDPLGYEDVIPEADR/SQEP

E11 1

DGEKTLENNEENKDEKLILIDEFEVLANKFISRLPNIPSTPREFGLGKGEIMEIDVPF
GS

IFAYRHIGSIRQKEYRIVGLYRNDVLLLSTKSLVIQPRDILLVAGNPEILNAVYLQV
KSN

VGQFPAPFGKSIYLYIDMRLQNRKAMMRDVYQALFLHKHLKSYKLYIQVLHPTS
PKFYHK

FLALETESIEVNFDYRKS/SQEP

E12 1 DGELFHYIRKHGP/SQEP

=> e taarkaragl/sqep

E1 1

TAARGIYGGPIKKLLPRKPADVKSGSFKTAAPFFFFLGTRTLTEFLFIIIQN'AAA'K
Q

PKRPSTDRINKLWYISTIEYYSAMKRNKLLIHTTAWMNYKGIMVSKRGQSQKSIF
SRTKT

GFGRNHISGCFLYPLPLRL/SQEP

E2 1

TAARHRRRRRAPPGPTSRRWPGAAGARWRPAADWRRGPGAGRGWRHGRAGR
SATARPPAA

AGRRASPAAAKEPPAMPGAARQDPAARHRAAAPGCRAAVRRDRDDGADTGRA
VAGRYSGP

PAPAGRTDRRRARRRAGGPGRSGGRGGGTVPSCGVPPGLAGDCATPGRWSRRP
CKAAGER

PYLEVPGFQPEESVMASGWA/SQEP

E3 0 --> TAARKARAGL/SQEP

E4 1 TAARLKALGDELHQR/SQEP

E5 1 TAARLYHFPHGGDVIDSPGVREFGLWHLEP/SQEP

E6 1

TAARMATTATSMACVSSAKCWRRCARPPPTSSSACACPPTSATPRVSAKASR
CRRPRR

SRASWTTCTSSPALRPPSAAPFISSRRWPSSRPTWPAKPVPSRRAWRSRCSSPGAS
TSPR

RPRPSSPEARPTSAA/SQEP

E7 1 TAARQSTNAYPDLRS/SQEP

E8 1

TAARRGRRRRLSILAAQALAEPSFRFRISDDQGVTRLDAALLRRGGSGAGDHA
GARLQ

RHPRLRRDARAGTGGDGDRLPDPGRGRHAGTLPGAAPVRRVAGLQPVPRLAGA
VPGGPAA

AALAAIVHPVQRTAADARRMAERAADAARALSQPDQRGAGAQGHRDRARRIRP
DRPVGAD

LVAGQPAGGGERHDLPGAGA/SQEP

E9 1

TAARRREKGTAAARRRQKGTAAARRRQEGTAARRRQKGTAAARRRGRRGGRGRR
RGRRKEEG

GGGKVGRGGGGEKREKERKKEIGKKRKKKNKSRKEMSPFTCSQPQEKHSSILQLG
ETYLIS

TAKIVLSRLGKTEQVELLLCEMFCY/SQEP

E10 1

TAARRRQKEEGKSQGDPQPEAPPKGDVQTIRWLFETCPMSELAEKQGSEVTDPT
AKAEAQ

SCTWMFKPQPVDPRVGSREQHLQVSQVPAGERQTDRHVFETEPLQASGRPCGRR
PVRYS

RVEIPSGQVSRQKEVFQALEAGKKEEQEPRVIAGSIPAGSVHKFTWLFENCPMGS
LAAES

IQGGNLLEEQPMSPSGNRMQ/SQEP

E11 1

TAARRRQKGAAAAAETHGQAKAKSGWLKPYYFIELMESRKDITNQEELWKMKP
RRNLEED

DYLHKDTGETSMLKRPVLLHLHQTAHADEFDCPSELQHTQELFPQWHLPIKIAAI
IASLT

FLYTLLREVIHPLATSHQQYFYKIPILVINKVLPMSITLLALVYLPGVIAAIVQLH
NGT

KYKKFPHWLDKWMLTRKQFG/SQEP

E12 1

TAARRRQKGGEKPFEC'AAA'QCSYVASNQHEVTRHARQVHNGPKPLNCP'AAA'C
DCKQ

'AAA'DRS'AAA'FK'AAA'HV'AAA'/SQEP

=> s e4

1 TAARLKALGDELHQR/SQEP

95285 SQL=15

L15 1 (TAARLKALGDELHQR)/SQEP

(TAARLKALGDELHQR/SQEP AND SQL=15)

=> e ledlqvafra/sqep

E1 1 LEDLLMGTLGIVCPICSQK/SQEP

E2 2

LEDLQAKILGIPYKNNDLSMFVLLPNDIDGLEKVNA YTSLFFLSFPKAFCLRASE/S
QEP

E3 0 --> LEDLQVAFRA/SQEP

E4 1 LEDLRLSLE/SQEP

E5 1

LEDLVEAELKQFTRQLWIGVKPGVEPIPRGKLENKDRQDVVDSMVQQYSEDAGT
ITVQTL

RKIKQNFRAKRLES/SQEP

E6 1 LEDLYRLKAIYEKKK/SQEP

E7 1 LEDMFPNKVRAHMKFN'AAA-

AAA'LAHEI'AAA'AGADLLALTSRFEPGLIQLQGMRY

GIPPMCATTGGLADTVI/SQEP

E8 1

LEDMLYAASSIKSNYL VFMAELFWWFVVKPSFVQPRVVRPQGAEPVKDMPSIP
VLNAAK

RNVLDSSSDFPSSGEGATFTQSHLE/SQEP

E9 1 LEDMPVDPDNEAYE/SQEP

E10 1 LEDMSVMVL/SQEP

E11 1 LEDMSVMVLR/SQEP

E12 1 LEDMSVMVLRTQGPA/SQEP

=> e hitvdelrr/sqep

E1 1

HITTPTSASDKRSKDKVFEVLNRCGKKVEDVTRKAEALAGGLKDHLKFSPSIGD
AAMARL

SQGTKMIVEGGPERVFQREFGVLA AEKLLDSFVCYISTTWGPVTGVIYISNRRIAF
CSDY

AIRLPSSVGGNGVAAYYKVVMWEKIRSI/SQEP

E2 2

HITTSTIIMSKVKLTKE SIVALLTQGKDLEFEEDQNLVAFNFKTFCLENLDQIKKM
SVIS

CLTFLKNRQSIMKVIKQSDFTFGKITIKKTS DRIGATDMTFRRLDSLIRVRLVEETG
NSE

NLNTIKSKIASHPLIQAYGLPLDDAKSVRLAIMLGGSLPLIASVDSFEMISVVLAIY
QDA

KYKDLGIDPKKYDTKEALGK/SQEP

E3 0 --> HITVDELRR/SQEP

E4 1

HITVKSLLVPMDDPPKKKKKKKKKKKKKKKKKKKKGGGFKKNLWGGQKLTGEKKK
IFFFLKGG

KKKPLGIF/SQEP

E5 1 HITVYMKDVKVSL/SQEP

E6 1 HITWAV/SQEP

E7 1 HITWDQLWDIMN/SQEP

E8 1 HITWDQLWNLMN/SQEP

E9 1 HITWDQLWNVMLRRASLG/SQEP

E10 1 HITWDQLWNVMN/SQEP

E11 1 HITWDQLWRIMT/SQEP

E12 1 HITWEQLWDLMN/SQEP

=> e gqplpqeeld/sqep

E1 1

GQPLPAALFFYQWHLHFKELLAHPWGKTVWRFL'AAA'PLKKEGPHDPAIPLLDI
YPKNK

KW/SQEP

E2 1 GQPLPETLQLAVQGKRTLPG LQQQQQQQQQQQQQ/SQEP

E3 0 --> GQPLPQEELD/SQEP

E4 1 GQPLVFT/SQEP

E5 1 GQPLVLSAMKMETVVTSPVTE/SQEP

E6 2 GQPM/SQEP

E7 10 GQPMY/SQEP

E8 1 GQPMYGQPMY/SQEP

E9 1 GQPNDPGVY/SQEP

E10 2

GQPNPGGSAPQWPAGYARRPAQRRGGRQESPVVRGVAGVEQPARGNRWSSTP
/SQEP

E11 1 GQPPGAALCHGRGRCD CGVCICHVTEPGMFFGPLC/SQEP

E12 1
GQPPKNHPLLKAANDAVIDLPTPANISIIWWNFGSLLGLCLAAQILTGLFLAMHYT
SDIAT

AFSSVTHICRDVNYGWLIRNMHANGASFFFCIYLHIGRGLYYGSFLHKETWNVG
VILL

LVMMTAFVGYVLPWQGMSLWGATVITNLLSAFPYVGDALVQWIWGGFSVDNA
TLTRFFAF
HFLFPFVIVAMTLVHLIFLH/SQEP

=> e amireadvqd/sqep

E1 1 AMIPPPQSSVRKPRYVRRERPLDRATDPAAFPGEARISNV/SQEP

E2 1
AMIQTRDLQGGRAFGLLKAQQD'AAA'RLDEICTQLLDDLKYSNDEDLPSRLEGF
KEKYM

EFDLIGNGHIDIMYKLMLYKLAVPQTDLQLPRSIGEVYSGSGETISYPDFLM/SQ
EP

E3 0 --> AMIREADVQD/SQEP

E4 2
AMISIGFLG'AAA'IVRAHHIFTVGID'AAA'DT'AAA'AYFTC'AAA'TII'AAA-AAA
'IPKRGQ'AAA'N/SQEP

E5 1
AMISIGFLGVIG'AAA'AHHIFTV'AAA'IDVNARAYCTSATIIAIPITGGKVFS'AAA'

LATLHGSNMK'AAA'SAAVL'AAA'ALRFIFLFTVSGLTGIVLANSSLDIVLHDTYYV
RA

HFHYVLSIGAGFAIIGGFIH'AAA'FPLFSGYT/SQEP

E6 2
AMISIGILGFIVWAHHMFTVGLDVDTRAYFTAATMIIAIPITGVKVFSWLATLQGV
PFNMS

KAHPSIFWALGFIFLFTIGGLTGIVLSNSSLNVALHDTYYVTAHFHYVLSMGAVF
AIFAG

FTHWFSLFTGATLDRASALAHFFIMFIG/SQEP

E7 1
AMISIGILGFIVWAHHMFTVGMDVDTRAYFTAATMIIAVPTGIKIFSWLATIYGGG
PRLD

TPMLWAIGFVFLFTIGGLTGIVLANSSLDIMLHDTYYVVAHFHYVLSMGAIFAIFG
GYYY

WFGKITGFSYNELYGKIHFWIM/SQEP

E8 1 AMISINIGIFNLIPALDGG/SQEP

E9 2
AMISKIWAARPTASGRPAMVILASERSWATPEMMASSMSDPFVMSVGLTQVPG
LSENEE

RTCTGTSSRRAYSTQRRWRILAPQAAISSISS/SQEP

E10 1
AMISRRRFLQATAATIATSSGFGYMHYCLNSDAIALGIEQRPDLILLGGDYVLFD
MSLNS

SAYSDVLSPLAECAPTFACFGNHDRPVGTEKNHLIGETLKSAVITGMLNQATVIA
YANRP

FELVGTGDLWSGQCKSASASETNLSRLVLAHNCSKEVMRDEPCDLMLGSHTH
RWQLSVP

MAGEPFCHVADERYVLGLNA/SQEP

E11 1 AMISSPPFRAICQEGK/SQEP

E12 1 AMISTPNENN/SQEP

=> e yeefarmlaq/sqep

E1 2 YEEEVLSR/SQEP

E2 1 YEEEW/SQEP

E3 0 --> YEEFARMLAQ/SQEP

E4 4 YEEFE/SQEP

E5 1 YEEFV/SQEP

E6 2 YEEFVQ/SQEP

E7 1 YEEFVQM/SQEP

E8 1 YEEFVQMM/SQEP

E9 2 YEEG/SQEP

E10 1 YEEGAAARDGRLWAGDQILEVNGVDLRNSSHEEAITALRQT/SQEP

E11 1 YEEGVAV/SQEP

E12 2 YEEH/SQEP

=> s l14 or l15

L16 3 L14 OR L15

=> file caplus

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		22.90	330.01

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE
TOTAL	

	ENTRY	SESSION
CA SUBSCRIBER PRICE		0.00 -7.16

FILE 'CAPLUS' ENTERED AT 13:52:17 ON 07 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 7 May 2003 VOL 138 ISS 19
FILE LAST UPDATED: 6 May 2003 (20030506/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l16
L17 3 L16

=> d l17 1-3 all

L17 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 2003:112150 CAPLUS
DN 138:131969

TI Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences

AU Strausberg, Robert L.; Feingold, Elise A.; Grouse, Lynette H.; Derge, Jeffery G.; Klausner, Richard D.; Collins, Francis S.; Wagner, Lukas; Shenmen, Carolyn M.; Schuler, Gregory D.; Altschul, Stephen F.; Zeeberg, Barry; Buetow, Kenneth H.; Schaefer, Carl F.; Bhat, Narayan K.; Hopkins, Ralph F.; Jordan, Heather; Moore, Troy; Max, Steve I.; Wang, Jun; Hsieh, Florence; Diatchenko, Luda; Marusina, Kate; Farmer, Andrew A.; Rubin, Gerald M.; Hong, Ling; Stapleton, Mark; Soares, M. Bento; Bonaldo, Maria F.; Casavant, Tom L.; Scheetz, Todd E.; Brownstein, Michael J.; Usdin, Ted B.; Toshiyuki, Shiraki; Carninci, Piero; Prange, Christa; Raha, Sam S.; Loquellano, Naomi A.; Peters, Garrick J.; Abramson, Rick D.; Mullahy, Sara J.; Bosak, Stephanie A.; McEwan, Paul J.; McKernan, Kevin J.; Malek, Joel A.; Gunaratne, Preethi H.; Richards, Stephen; Worley, Kim C.; Hale, Sarah; Garcia, Angela M.; Gay, Laura J.; Hulyk, Stephen W.; Villalon, Debbie K.; Muzny, Donna M.; Sodergren, Erica J.; Lu, Xiuhua; Gibbs, Richard A.; Fahey, Jessica; Helton, Erin; Kettelman, Mark; Madan, Anuradha; Rodrigues,

Stephanie; Sanchez, Amy; Whiting, Michelle; Madan, Anup; Young, Alice C.;
 Shevchenko, Yuriy; Bouffard, Gerard G.; Blakesley, Robert W.; Touchman,
 Jeffrey W.; Green, Eric D.; Dickson, Mark C.; Rodriguez, Alex C.;
 Grimwood, Jane; Schmutz, Jeremy; Myers, Richard M.; Butterfield, Yaron S.
 N.; Krzywinski, Martin I.; Skalska, Ursula; Smailus, Duane E.; Schnerch,
 Angelique; Schein, Jacqueline E.; Jones, Steven J. M.; Marra, Marco A.
 CS National Cancer Institute, NIH, Bethesda, MD, 20892-2580, USA
 SO Proceedings of the National Academy of Sciences of the United States of
 America (2002), 99(26), 16899-16903
 CODEN: PNASA6; ISSN: 0027-8424
 PB National Academy of Sciences
 DT Journal
 LA English
 CC 3-3 (Biochemical Genetics)
 484303-55-1 484303-57-3 484303-59-5
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL
 (Biological study)
 (amino acid sequence; generation and initial anal. of more than 15,000
 full-length human and mouse cDNA sequences)
 (Biological study)
 (nucleotide sequence; generation and initial anal. of more than 15,000
 full-length human and mouse cDNA sequences)

L17 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2002:927597 CAPLUS

DN 138:20526

TI Protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and
 mouse, and their uses in modulating apoptosis

IN Strasser, Andreas; Puthalakath, Hamsa; Villunger, Andreas; Coultas, Leigh;
 Beaumont, Jennifer; O'Reilly, Lorraine Ann; Huang, David Ching Siang

PA The Walter and Eliza Hall Institute of Medical Research, Australia

SO PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12N015-12

ICS C07K014-435; C07K016-18; A61K038-17; A61K039-395; A61K048-00

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 1, 6, 13

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI	WO 2002097094	A1	20021205	WO 2002-AU693	20020530
----	---------------	----	----------	---------------	----------

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI AU 2001-5351 A 20010530

AB The present invention provides protein and cDNA sequences of Bcl-2-modifying factors (Bmf) from human and mouse, that are capable of, inter alia, modulating apoptosis in mammalian cells. More particularly, the present invention relates to a novel member of the Bcl-2 family of proteins, referred to herein as "Bmf", and to genetic sequences encoding same and to regulatory sequences such as a promoter sequence directing expression of Bmf. Bmf comprises a BH3 domain which facilitates interaction to pro-survival Bcl-2 family members thereby triggering apoptosis. Bmf is regarded, therefore, as a BH3-only mol. The mols. of the present invention are useful, for example, in therapy, diagnosis, antibody generation and as a screening tool for therapeutic agents capable of modulating physiol. cell death or survival and/or modulating cell cycle entry. The present invention further contemplates genetically modified animals in which one or both alleles of Bmf are mutated or partially or wholly deleted alone or in combination with a mutation in one or both alleles of another Bcl-2-type mol. such as but not limited to Bim. The genetically modified animals are useful inter alia in screening for agents which ameliorate the symptoms of diseases caused by defects in apoptosis or which specifically promote apoptosis of target cells.

ST sequence Bcl2 modifying factor human mouse apoptosis

IT Proteins

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Bcl-2-modifying factor; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT Gene, animal

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Bcl-2; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT Proteins

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Blk, Bad, Bik, Hrk, Bid, Bim, Noxa, Puma; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT Gene, animal

RL: BSU (Biological study, unclassified); PRP (Properties); THU

- (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (Bmf; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Immunoassay
 - (for detecting Bmf; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Dyneins
 - RL: BSU (Biological study, unclassified); BIOL (Biological study)
 - (light chain; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Apoptosis
 - (modulating; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Antibodies
 - RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 - (monoclonal, to Bmf; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Gene therapy
 - Human
 - Molecular cloning
 - Mouse
 - Mutation
 - Protein sequences
 - cDNA sequences
 - (protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Drugs
 - (relates to Bmf; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Embryo, animal
 - (stem cell; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Antibodies
 - RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
 - (to Bmf; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT Animal
 - Rat
 - Swine
 - (transgenic; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)
- IT 477911-67-4P, Bcl-2-modifying factor (mouse) 477911-71-0P,

Bcl-2-modifying factor (human)

RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amino acid sequence; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT 477911-66-3 477911-68-5 477911-69-6 477911-70-9

RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(nucleotide sequence; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT 477841-11-5 477841-12-6

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT 477916-47-5, 7: PN: WO02097094 SEQID: 9 unclaimed DNA 477916-48-6 477916-49-7 477916-50-0 477916-51-1 477916-52-2 477916-53-3 477916-54-4

RL: PRP (Properties)

(unclaimed nucleotide sequence; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT 477916-55-5

RL: PRP (Properties)

(unclaimed protein sequence; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

IT 185009-18-1 185009-21-6 185009-24-9 477841-13-7 477841-14-8 477841-15-9 477841-16-0 477841-17-1

RL: PRP (Properties)

(unclaimed sequence; protein and cDNA sequences of Bcl-2-modifying factor (Bmf) from human and mouse, and their uses in modulating apoptosis)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Puthalakath, H; Science 2001, V293(5536), P1829 CAPLUS

L17 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2000:707297 CAPLUS

DN 133:291966

TI Nucleic acids including human open reading frames encoding ORFX polypeptides

IN Shimkets, Richard A.; Leach, Martin

PA Curagen Corporation, USA

SO PCT Int. Appl., 5509 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12N015-12

ICS C07K014-47; C07K016-18; G01N033-566; C12Q001-68; C12N015-11;

C12N015-62; A01K067-027; A61K038-00

CC 3-3 (Biochemical Genetics)

Section cross-reference(s): 1, 6, 13, 14

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI WO 2000058473	A2	20001005	WO 2000-US8621	20000331
------------------	----	----------	----------------	----------

WO 2000058473	A3	20010125		
---------------	----	----------	--	--

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2000037745	A5	20001016	AU 2000-37745	20000331
---------------	----	----------	---------------	----------

EP 1165784	A2	20020102	EP 2000-916677	20000331
------------	----	----------	----------------	----------

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI US 1999-127607P P 19990331

US 1999-127636P P 19990402

US 1999-127728P P 19990405

US 2000-540763 A2 20000330

WO 2000-US8621 W 20000331

AB The present invention provides 3161 different human open reading frames ORFX, encoding isolated polypeptides, as well as polynucleotides encoding ORFX and antibodies that immunospecifically bind to ORFX or any deriv., variant, mutant, or fragment of the ORFX polypeptides, polynucleotides or antibodies. The invention addnl. provides methods in which the ORFX polypeptide, polynucleotide and antibody are used in detection and treatment of a broad range of pathol. states, as well as to other uses.

ST ORFX protein cDNA sequence human; open reading frame protein cDNA sequence human

IT Proteins, specific or class

RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use);

- BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
 - (ORF X; nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Animal tissue
 - (ORFX expression specificity; nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Immunoassay
 - Nucleic acid amplification (method)
 - Nucleic acid hybridization
 - (detection by; nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Disease, animal
 - (diagnosis and treatment of ORFX-assocd.; nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Diagnosis
 - (genetic; nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Drug screening
 - Drugs
 - Gene therapy
 - Molecular cloning
 - Protein sequences
 - Test kits
 - cDNA sequences
 - (nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Gene, animal
 - RL: BOC (Biological occurrence); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
 - (nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Primers (nucleic acid)
 - Probes (nucleic acid)
 - RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 - (nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Antibodies
 - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (nucleic acids including human open reading frames encoding ORFX polypeptides)
- IT Antisense oligonucleotides
 - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(nucleic acids including human open reading frames encoding ORFX polypeptides)

IT Peptide nucleic acids

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleic acids including human open reading frames encoding ORFX polypeptides)

IT Ribozymes

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleic acids including human open reading frames encoding ORFX polypeptides)

IT Susceptibility (genetic)

(to ORFX-assocd. diseases; nucleic acids including human open reading frames encoding ORFX polypeptides)

IT Disease models

(transgene-contg. test animals; nucleic acids including human open reading frames encoding ORFX polypeptides)

IT 119938-85-1P 148847-20-5P, Phosphoprotein (human gene c-raf-1 reduced)
149148-23-2P 157010-86-1P 158380-01-9P 161351-21-9P,
Growth/differentiation factor 9 (human) 176430-69-6P 179608-31-2P
194813-67-7P 199129-30-1P, RNA-binding protein A18 (human)
199302-93-7P, Protein (human brain gene hCPE-R) 203673-69-2P
210819-07-1P 211557-12-9P, Protein (human clone KIAA0709 reduced)
213468-10-1P 214773-95-2P 217795-43-2P, Protein (human clone HP10230)
219903-09-0P 221184-54-9P 221219-64-3P 221269-44-9P, Desaturase,
linoleate (human) 221456-23-1P 221546-49-2P 222619-69-4P
222963-62-4P, Protein (human brain gene KIAA0867) 222963-63-5P
222964-17-2P 222964-25-2P, Protein (human brain gene KIAA0914)
223117-14-4P, Protein (human brain clone OMB108) 223381-46-2P, Protein
(human gene MASL1) 225929-50-0P, Protein (human pancreas gene TSA305)
226218-08-2P 226888-56-8P 226888-60-4P, KIAA0936 protein (human clone
hh04647) 226889-15-2P 226890-15-9P, KIAA0977 protein (human clone